**Technical Guide Document**

Submitted by:



Table of Contents

[1 Technology platform 3](#_Toc508204849)

[2 JDK setup- 4](#_Toc508204850)

[2.1 Linux server 4](#_Toc508204851)

[2.2 Windows server 4](#_Toc508204852)

[3 MySQL Installation in Linux server 5](#_Toc508204853)

[3.1 Steps to be followed during the installation of MySQL in Linux: 5](#_Toc508204854)

[3.2 Accessing MySQL installed on the server 9](#_Toc508204855)

[4 Starting Jboss server in Linux using Putty 10](#_Toc508204856)

[5 Application (WAR file) deployment within JBoss 13](#_Toc508204857)

# Technology platform

|  |  |  |
| --- | --- | --- |
| **Sl. No.** | **Functionality** | **Component Required\*** |
| 1 | Operating System | CentOS |
| 2 | Application Server | Wildfly Application Server |
| 3 | Web Server | Apache HTTP Server |
| 4 | Application Database | MySQL Community Edition |
| 5 | Document/Image Management System | Custom built File Management System |
| 6 | Reporting and Dashboard | JasperReports |
| 7 | Other technology / Scripting Language | Java, JSP, Spring, Ajax, Eclipse |

# JDK setup-

## Linux server

**Follow the following steps to install JDK and set JAVA\_HOME:**

1. Download the set up file for jdk1.6.\_21 (Linux OS).
2. Install java in a folder such as /usr/java
3. Now open the text file **profile** kept under the folder /etc

Use the following commands to set JAVA\_HOME

**export JAVA\_HOME=/usr/java/jdk1.6.0\_21;**

**export PATH=$JAVA\_HOME/bin:$PATH;**

1. Restart the server. Once the server has been restarted, open a terminal and give the command:

**echo $JAVA\_HOME.**

If JAVA\_HOME has been set up correctly, the command should show the path for JAVA\_HOME.

## Windows server

**Follow the following steps to install JDK and set JAVA\_HOME:**

1. Double click on the jdk installer and follow the instruction
2. On the desktop, Right click on My Computer then click on Properties.
3. On the properties dialog box, on the left panel click Advanced System Settings. On the System Properties dialog box, go to Advanced tab and Click on Environment Variables.
4. Under System variables, create new variable by clicking on New button and give the Variable name as JAVA\_HOME and Variable value is the path of the jdk where it is installed. For eg, the variable value would be C:\Program Files\Java\jdk1.6.0\_24. And then click on OK.

# MySQL Installation in Linux server

## Steps to be followed during the installation of MySQL in Linux:

1. Download the latest stable release of MySQL.

Make sure to download MySQL Server, Client and “Headers and libraries” from the download page.

* MySQL-client-community-5.1.53-1.rhel4.i386.rpm
* MySQL-server-community-5.1.53-0.rhel5.i386.rpm
* MySQL-devel-community-5.1.53-1.rhel5.i386.rpm

All the above releases can be downloaded from the below link:

<http://downloads.mysql.com/archives.php?p=mysql-5.1&v=5.1.53>

1. Install the downloaded MySQL package

Install the MySQL Server and Client packages as shown below.

[local-host]# **rpm -ivh MySQL-server-community-5.1.53-0.rhel5.i386.rpm MySQL-client-community-5.1.53-0.rhel5.i386.rpm**

Preparing...                ########################################### [100%]

1: MySQL-client-community ########################################### [ 50%]

2: MySQL-server-community ########################################### [100%]

This will display the following output and start the MySQL daemon automatically:

***Note***:

REMEMBER TO SET A PASSWORD FOR THE MySQL root USER !

To do so, start the server, then issue the following commands:

/usr/bin/mysqladmin -u root password 'new-password'

Alternatively you can run:

/usr/bin/mysql\_secure\_installation

Above command will also give you the option of removing the test data bases and anonymous user created by default.  This is strongly recommended for production servers.

The latest information about MySQL is available at http://www.mysql.com/

Support MySQL by buying support/licenses from http://shop.mysql.com/

**Starting MySQL.[  OK  ]**

Giving mysqld 2 seconds to start

1. Install the “Header and Libraries” that are part of the MySQL-devel packages.

[local-host]# **rpm -ivh MySQL-devel-community-5.1.53-0.rhel5.i386.rpm**

Preparing...                ########################################### [100%]

1:MySQL-devel-community  ########################################### [100%]

1. Perform post-install security activities on MySQL

Run the mysql\_secure\_installation script that will take care of all the typical security related items on the MySQL as shown below. On a high level this does the following items:

* Change the root password
* Remove the anonymous user
* Disallow root login from remote machines
* Remove the default sample test database
* **[local-host]# /usr/bin/mysql\_secure\_installation**
* NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MySQL
* SERVERS IN PRODUCTION USE!  PLEASE READ EACH STEP CAREFULLY!
* In order to log into MySQL to secure it, we'll need the current
* password for the root user.  If you've just installed MySQL, and
* you haven't set the root password yet, the password will be blank,
* so you should just press enter here.
* Enter current password for root (enter for none):
* OK, successfully used password, moving on...
* Setting the root password ensures that nobody can log into the MySQL
* root user without the proper authorisation.
* You already have a root password set, so you can safely answer 'n'.
* **Change the root password? [Y/n] Y**
* **New password:**
* **Re-enter new password:**
* Password updated successfully!
* Reloading privilege tables..
* ... Success!
* By default, a MySQL installation has an anonymous user, allowing anyone
* to log into MySQL without having to have a user account created for
* them.  This is intended only for testing, and to make the installation
* go a bit smoother.  You should remove them before moving into a
* production environment.
* **Remove anonymous users? [Y/n] Y**
* ... Success!
* Normally, root should only be allowed to connect from 'localhost'.  This
* ensures that someone cannot guess at the root password from the network.
* **Disallow root login remotely? [Y/n] N**
* ... Success!
* By default, MySQL comes with a database named 'test' that anyone can
* access.  This is also intended only for testing, and should be removed
* before moving into a production environment.
* **Remove test database and access to it? [Y/n] Y**
* - Dropping test database...
* ... Success!
* - Removing privileges on test database...
* ... Success!
* Reloading the privilege tables will ensure that all changes made so far
* will take effect immediately.
* **Reload privilege tables now? [Y/n] Y**
* ... Success!
* Cleaning up...
* All done!  If you've completed all of the above steps, your MySQL
* installation should now be secure.
* Thanks for using MySQL!

1. Verify the MySQL installation

Check the MySQL installed version by performing mysql -V as shown below:

[local-host]# **mysql –V**

Connect to the MySQL database using the root user and make sure the connection is successful.

[local-host]# **mysql -u root -p**

Enter password:

Welcome to the MySQL monitor.  Commands end with ; or \g.

Your MySQL connection id is 13

Server version: 5.1.53-rc-community MySQL Community Server (GPL)

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql>

Follows the steps below to stop and start MySQL

[local-host]# **service mysql status**

[local-host]# **service mysql stop**

[local-host]# **service mysql start**

## Accessing MySQL installed on the server

In order to access the ‘MySQL’ installed on the server from a different host, the following steps need to be followed.

1. Ensure that the server is accessible from other systems

*Ping the IP address of the server to confirm that it is accessible.*

1. Execute the below command to access the various database schemas:

**GRANT ALL ON <Schema Name>.\* TO 'username'@'I.P address ' IDENTIFIED BY 'password'**

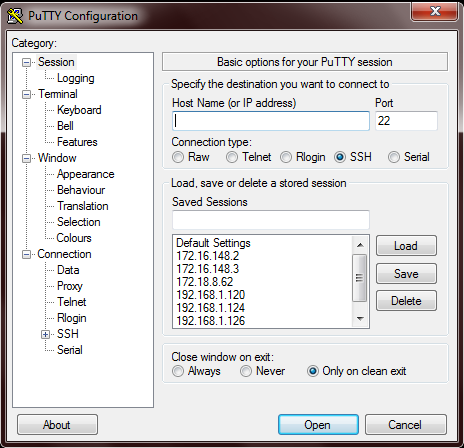
e.g: If the database access needs to be given to all I.P addresses within the network, then the following command needs to be run:

**GRANT ALL ON <Schema Name>.\* TO 'root'@'% ' IDENTIFIED BY 'root' – Assuming that the username and password is root.**

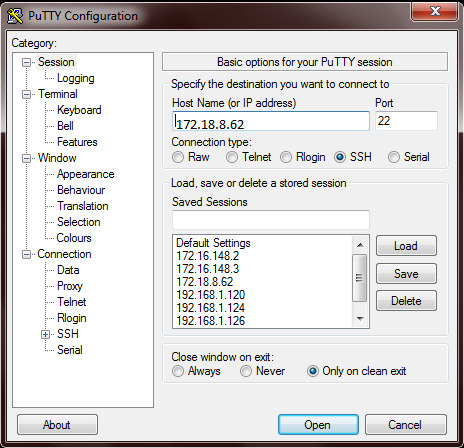
# Starting Wildfly server in Linux using Putty

Follow the following steps to start the Jboss:

1. Double click on Putty, a dialog box will open up as follows



1. Now in the Host Name (or IP address) text field enter the IP of the server you want to configure or setup, as follows:



1. Now click on open, which will open up another dialog box, and login using the credentials given below:

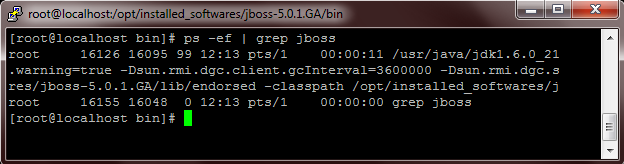
Login as: root

Password: Inf0rm@t!on

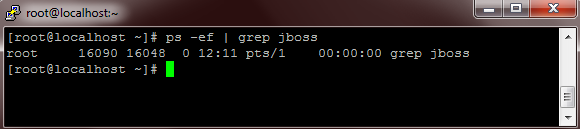
1. Now type in the following command to check whether the jboss server is on or not:

ps –ef | grep jboss

1. if the above command outputs as below then the server is up and running:



1. and if the output is as follows then the server is down, you need to start it:



1. Now, if the server is up and running, and still then you need to restart the server, then what you need to do is first stop all the jboss server process before restarting the jboss server. To do so, type in the command mentioned in point no. 4, which will display you with those outputs like in point no. 4(a). Now just execute the following command:

kill -9 [PID]\*

\*= PID is the process ID, and in this case its **16126,** PID is the unique no. which identifies each and every processes running in your system.

And after executing the above mentioned command, again check to see if the process has been killed or not, to do so, execute the same command like in point no. 4, if the output is like point no. 4(a) then the process has not stopped you need to kill it once again using point no. 5 command. And if the process has stopped then you will be able to see like in point no. 4(b).

1. Now, to start the jboss server, first of all you need to enter the directory where jboss server is kept, you can do so using the following command:

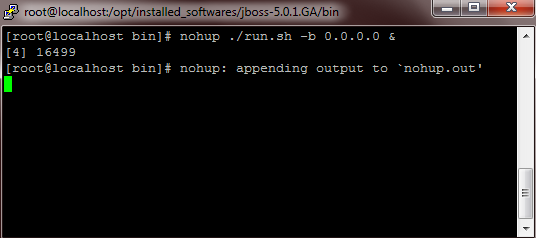
cd /opt/jboss-7.1.0.Final/bin (press enter).

1. Now after your inside the particular directory execute the following command:

nohup ./ /standalone.sh –b 0.0.0.0 &

Service jboss start

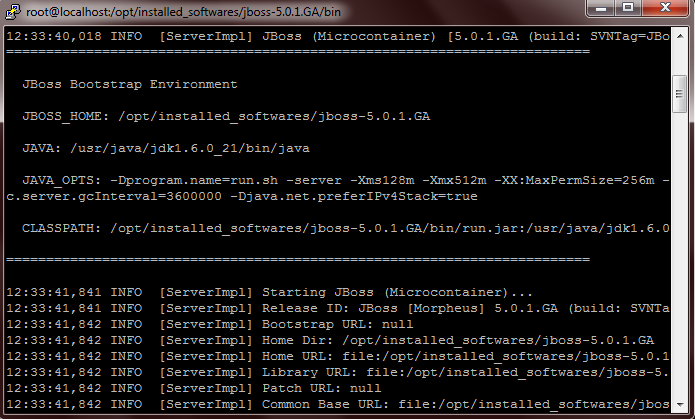
on executing the above command you will see as follows:



1. After the executing the above command successfully executing the following command:

tail -100f nohup.out

this command will show you the loading screen for the jboss server console as follows:



1. Now press CTRL+C, and then you can check whether the jboss server has started or not using the command in point no. 4, should display the screen like in point no.4 (a).

# Application (WAR file) deployment within Wildfly.

Follow the following steps to deploy the application war file:

1. Copy the war file in the following location:
2. opt/wildfly/standalone/deployments
3. then start the server and the war should get deployed else go to opt/wildfly/standalone/deployment and run the following command touch pdms.war dodeploy